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EXAMINER

STULII, VERA

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/629,759
Filing Date: July 30, 2003
Appellant(s): ROY ET AL.

Katie L. Becker
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/29/2010 appealing from the Office action mailed 01/05/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1, 3-7, 10-13, 15-21, 24 and 25.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

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subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

JP2001323263	Akihiko et al	11-2001
JP 2002138024	Taguchi et al	05-2002

COFFEE: RELATED BEVERAGES, Edited by Clarke, R. J. and Macrae, R.
Elsevier Applied Science, 1987, pp. 1, 2, 12, 16.

<http://web.archive.org/web/20020612072429/http://www.mc.vanderbilt.edu/coffee/chemical.html>

ICS Research (Institute for Coffee Studies), 06-2002

Horn-Ross, P. L. Sources of Phytoestrogen Exposure among Non-Asian Women in California, USA

Cancer Causes & Control, Vol. 11, No. 4. (Apr., 2000), pp. 299-302.

Stable URL: <http://links.jstor.org/sici?sici=0957-5243%28200004%2911%3A4%3C299%3ASOPEAN%3E2.0.CO%3B2-8>

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-7, 10-11, 15-17, 19-21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263).

ICS (Institute for Coffee Studies) and Horn-Ross are cited as evidence as discussed below.

Akihiko et al discloses pigment fading inhibitor and method for inhibiting fading of pigment using pigment fading inhibitor (Abstract). In regard to claim 1, 20, 21, 22-25 Akihiko et al disclose a food coloring composition comprising pigment color and pigment fading inhibitor (Abstract). Akihiko et al disclose riboflavin, carothene and other pigments, and coffee bean extract as a pigment fading inhibitor (Abstract). In regard to

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claims 20 and 21, Akihiko et al also disclose that color (pigment) is used for food and beverages (Abstract). Akihiko et al disclose that raw coffee beans extract contains 33% of chlorogenic acid (p. 4 [0015]). Regarding “*synthetic* color” limitation, Akihiko et al disclose industrial riboflavin preparation (p.3 [0014]).

As evidenced by ICS, “Green coffee beans contain up to 10% of chlorogenic acids, i.e., various isomers of hydroxy-cinnamoyl esters of quinic acid (a common plant constituent)”. Regarding claim 10, as evidenced by ICS, “Green coffee beans contain up to 10% of chlorogenic acids, i.e., various isomers of hydroxy-cinnamoyl esters of quinic acid (a common plant constituent)”. Regarding claim 11, as evidenced by Horn-Ross, primary sources of coumestrol and lignans include orange juice and coffee (p. 300). Regarding claim 15, as evidenced by Horn-Ross, coffee is a major source of daidzein (isoflavone) (p. 300). Regarding claim 16, Akihiko et al disclose botanical extract (coffee bean). Regarding claims 17, 24, and 25, Akihiko et al disclose that raw coffee beans (green coffee beans) extract contains 33% of chlorogenic acid (p. 2 [0009]; p. 4 [0015]).

Regarding claims 3-7, Akihiko et al teach that concentrations color inhibiting composition and color are not limited, and may be chosen depending on “content and concentration of coloring matter”, preferably 0.001 to 500% of the weight of the coloring matter (p. 3 [0013]).

Since Akihiko teach the use of a botanically derived color stabilizer from coffee extract, and since coffee extract contains chlorogenic acids, isomers of hydroxy-cinnamoyl esters, coumestrol (coumarin), and daidzein (isoflavone), then coffee extract disclosed by Akihiko meets limitation of chlorogenic acid and cinnamoyl esters recited in

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claims 1 and 20-21, coumestrol (coumarin) recited in claims 1, 11 and 20-21, and daidzein (isoflavone) recited in claims 1, 15 and 20-21.

Akihiko et al do not disclose colors/pigments as currently recited. However, as disclosed by Appellant and understood in the art, each of the originally claimed synthetic colors would be a functional equivalent known in the art. Color additives as taught by Akihiko et al and recited by Appellant were known to be added or applied to a food, drug or cosmetic, are capable of imparting color. These color additives were used in foods for the reasons of offsetting color loss due to exposure to light, air, temperature extremes, moisture and storage conditions; correcting natural variations in color; enhancing colors that occur naturally; etc. Since color additives as recited and taught by Akihiko et al are functional equivalents known for the same purpose, it would have been obvious to substitute one for another. It would also have been obvious to substitute one color additive for another based on expectation of similar functions and similar positive results. The concept of preventing color fading using botanically derived color stabilizers is taught by Akihiko et al and therefore is shown to be known. Substitution of one color additive with another for the same purpose would not impart any patentable distinction.

Regarding “*synthetic* color” limitation, Akihiko et al disclose industrial riboflavin preparation (p.3 [0014]). In any case, the concept of preventing color fading using botanically derived color stabilizers is taught by Akihiko et al and therefore is shown to be known. Akihiko et al recognizes the problem of color fading, and teaches the solution of the problem, i.e. preventing color fading using botanically derived color stabilizers. One of ordinary skill in the art would have been motivated to employ teachings of

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Akihiko et al and to solve the same problem (color fading) by applying known solution as disclosed by Akihiko et al (preventing color fading using botanically derived color stabilizers).

Regarding claim 19, Akihiko et al do not disclose that coloring composition contains sorbic acids, aconitic acid, fumaric acid, or maleic acid. However, Akihiko et al disclose that additional substance may be added to coffee bean extract, for example ascorbic acid as a reducing agent (p. 2 [0010]). It was well known in the art that fumaric acid and sorbic acids are strong reducing agents that were used in food industry. One of ordinary skill in the art would have been motivated to modify disclosure of Akihiko et al and to use fumaric or sorbic acid as a reducing agent as taught by Akihiko et al. One of ordinary skill in the art would have been motivated to do so, since Akihiko et al teach adding any reducing agents. One of ordinary skill in the art would also have been motivated to do so, since fumaric acid and ascorbic acid were well known reducing agents.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263) in view of COFFEE (COFFEE: RELATED BEVERAGES).

Akihiko et al is taken as cited above.

Akihiko et al do not disclose use of botanical extracts other than coffee bean extract. It is not clear whether coffee extract contains chalcones and flavones.

COFFEE reference discloses that dandelion root is a well known coffee substitute that is sometimes used to a considerable extent. COFFEE discloses that

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“dandelion root was known in 1855, and was produces industrially in this century in Denmark and Sweden” (p. 12). COFFEE also discloses that similarity of the root with that of chicory has long been recognized (p. 12). COFFEE also discloses that chicory was a well known coffee substitute that is still widely commercially produced (p. 2). COFFEE reference also discloses that hawthorn (the fruits of *Crataegus oxyacantha* L.) were used as a coffee substitute by the German Government in the First World War (p.16).

On pages 6-7 of Specification is stated that “In other preferred embodiments, the C6-C3 phenylpropenoic carbonyl compound is selected from cinnamoyl esters, coumarins, chalcones, flavones, chromones, isoflavones, and combinations thereof and may optionally be provided in the form of an extract of a botanical selected from horse chestnut extract, dandelion extract, eucalyptus extract, stringybark extract, saw palmetto extract, honeysuckle extract, hawthorn extract, noni fruit extract, red clover extract, orange extract, buckwheat extract, chamomile extract and combinations thereof” [0021]. Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since dandelion root and hawthorn were well known coffee substitutes, one of ordinary skill in the art would have been motivated to substitute one coffee material with another coffee material (dandelion or hawthorn), since beans, dandelion root and hawthorn were well known coffee substitutes. Since COFFEE discloses dandelion root extract and hawthorn extract, it also meets limitations of claims 12 and 13 according to Appellants’ disclosure.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263) in view Taguchi et al (JP 2002138024).

Akihiko et al is taken as cited above. Akihiko et al do not disclose use of botanical extracts other than coffee bean extract. Taguchi et al disclose hair dye composition comprising the following botanical extracts: Rubia akane, turmeric, sappanwood, cork tree, Sophora japonica, cochineal, chestnut, onion and/or coffee (Abstract). Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since Taguchi et al discloses coffee extract or chestnut extract as a part of a stable dyeing composition, one of ordinary skill in the art would have been motivated to substitute coffee extract with chestnut extract, since Taguchi et al discloses that coffee and chestnut extracts are functional equivalents in the stable dyeing composition comprising various coloring botanical extracts.

(10) Response to Argument

Appellant's arguments filed 06/29/2010 have been fully considered but they are not persuasive.

In regard to Appellants' arguments regarding preventing the color fading of natural and synthetic colors (pages 9-11 and 14 of the Appeal Brief), it is noted that the concept of preventing color fading using botanically derived color stabilizers is taught by Akihiko et al and therefore is shown to be known. Akihiko et al recognizes the problem of color fading, and teaches the solution of the problem, i.e. preventing color fading using botanically derived color stabilizers. One of ordinary skill in the art would have

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been motivated to employ teachings of Akihiko et al in order to solve the same problem (color fading) by applying known solution as disclosed by Akihiko et al (preventing color fading using botanically derived color stabilizers). Even though Akihiko et al do not disclose colors/pigments as currently recited, as disclosed by applicant and understood in the art, each of the originally claimed synthetic colors would be a functional equivalent known in the art. Color additives as taught by Akihiko et al and recited by applicant were known to be added or applied to a food, drug or cosmetic, are capable of imparting color. These color additives were used in foods for the reasons of offsetting color loss due to exposure to light, air, temperature extremes, moisture and storage conditions; correcting natural variations in color; enhancing colors that occur naturally; etc. Since color additives as recited and taught by Akihiko et al are functional equivalents known for the same purpose, it would have been obvious to substitute one for another. It would also have been obvious to substitute one color additive for another based on expectation of similar functions and similar positive results. The concept of preventing color fading using botanically derived color stabilizers is taught by Akihiko et al and therefore is shown to be known. Substitution of one color additive with another for the same purpose would not impart any patentable distinction. In any case, the concept of preventing color fading using botanically derived color stabilizers is taught by Akihiko et al and therefore is shown to be known. Akihiko et al recognizes the problem of color fading, and teaches the solution of the problem, i.e. preventing color fading using botanically derived color stabilizers. One of ordinary skill in the art would have been motivated to employ teachings of Akihiko et al and to solve the same problem

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(color fading) by applying known solution as disclosed by Akihiko et al (preventing color fading using botanically derived color stabilizers).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., fading mechanism of the colors, presence or absence of oxygen, carbonation or hot-filling of beverages) are not recited in the rejected claim(s) (pages 9-10 of the Appeal Brief). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the rejection of claims 12-13 (pages 15-16 of the Appeal Brief), Appellants state that "COFFEE does not disclose the structure and properties of these ingredients in relation to coffee, or substitutability of these ingredients for coffee for any purpose other than flavor. Further, simply because roasted dandelion root and roasted hawthorn may be used to make a beverage for drinking as a coffee substitute, there is absolutely no reason to expect that extracts of dandelion root or hawthorn would provide active ingredients equivalent to an extract of a green coffee bean for the purpose of inhibiting the fading of synthetic colors as set forth in claims 12-13 of the instant application". Examiner respectfully disagrees. Coffee beans are primarily associated with coffee beverage as their main use. Therefore, one of ordinary skill in the art would have been fairly led to apply coffee beverage substitutes, as coffee beans substitutes. Further in this regard, it is noted that COFFEE reference discloses that dandelion root is a well known coffee substitute that is sometimes used to a

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considerable extent. COFFEE also discloses that similarity of the root with that of chicory has long been recognized (p. 12). COFFEE also discloses that chicory was a well known coffee substitute that is still widely commercially produced (p. 2). Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since dandelion root and hawthorn were well known coffee substitutes, one of ordinary skill in the art would have been motivated to substitute one coffee material with another coffee material (dandelion or hawthorn), since beans, dandelion root and hawthorn were well known coffee substitutes. Substitution of one coffee material with another would not impart any patentable distinction.

In response to the rejection of claim 18 (page 17 of the Appeal Brief), Appellants state that

Taguchi teaches a hair dye composition including "staining components obtained from powdered extract of root, stalk, flower, fruit or seed of plants, such as Rubia akane, turmeric, sappanwood, cork tree, Sophora japonica, cochineal, chestnut, onion and/or coffee (Taguchi translation, p. 2). In addition, the hair dye composition of Taguchi includes a metallic substance; a mordant including an aqueous solution of primary and secondary treating agents containing a reducer and alkali chemicals, and an oxidizing agent. Accordingly, Taguchi discloses that the botanical extracts are the dye colors themselves, and not color fading inhibitors.

In sum, Akihiko fails to disclose a botanically-derived fading inhibitor for synthetic colors. Further, Taguchi is completely silent regarding inhibiting the fading of synthetic colors and provides no explanation of what components of the hair dye composition result in the "excellent time-dependent stability, durability, color-fastness, quality and adhesivity on applied hairs." (Taguchi translation, p. 3).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

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are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Taguchi is not relied upon as a teaching of a fading inhibiting of synthetic colors. Taguchi et al is relied upon as a teaching of a color stable composition that includes coloring extracts as well as color stabilizers. The extracts included in the color stable composition as taught by Taguchi et al may include coloring agents that serve as color stabilizers (for example, coffee extract which is known to be a color stabilizer, or in other words, color fading inhibitor). Since coffee is used with other extracts in the color stable composition such as chestnut extract, one of ordinary skill in the art would have been motivated to substitute coffee extract with chestnut extract as a part of color stable composition. Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since Taguchi et al discloses coffee extract or chestnut extract as a part of a stable dyeing composition, one of ordinary skill in the art would have been motivated to substitute coffee extract with chestnut extract, since Taguchi et al discloses that coffee and chestnut extracts are functional equivalents in the stable dyeing composition comprising various coloring botanical extracts.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Vera Stulii/

Examiner, Art Unit 1781

Conferees:

/Gregory L Mills/

Supervisory Patent Examiner, Art Unit 1700

/Keith D. Hendricks/

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